DOCUMENT RESUME

ED 254 043 EC 172 003

AUTHOR Fischer, Wyman E.; And Others
TITLE Bannatyne Recategorization's Efficacy in Differentiating Learning Disabled and Emotionally Disturbed.
PUB DATE Apr 84
NOTE 14p.; Paper presented at the Conference of the National Association of School Psychologists (Philadelphia, PA, April, 1984).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Classification; *Emotional Disturbances; *Handicap Identification; *Learning Disabilities; *Scoring; Testing
IDENTIFIERS *Bannatyne System

ABSTRACT

The study was designed to determine the efficacy of the Bannatyne recategorization in differentiating subgroups of learning disabled from emotionally disturbed children. The sample was comprised of 327 male and female Ss who had been placed in special education classes for either the learning disabled or emotionally disturbed. A three factor MANOVA was employed to determine possible interactions among sex, type of special class placement, and type of achievement discrepancy of the Ss. Three Helmert type a priori contrasts were specified to determine if the recategorization was upheld for this sample generally or if it identified different cognitive structures for the various subgroups. The Bannatyne recategorization was supported but it did not differentiate among various subgroups of learning disabled and emotionally disturbed children. The analyses lent support to the notion that the classifications studied may be cognitive subsets of each other. (Seventeen references are listed and 13 graphs illustrate the results.) (Author/CL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

ED254043

BANNATYNE RECATEGORIZATION'S EFFICACY IN DIFFERENTIATING LEARNING DISABLED AND EMOTIONALLY DISTURBED

Abstract

Wyman E. Fischer
L. Stanley Wenck
K. Terry Schurr

Ball State University

This study was disigned to determine the efficacy of the Bannatyne recategorization in differentiating subgroups of learning disabled from emotionally disturbed children. The sample was comprised of 327 male and female subjects from a medium sized Indiana community who had been placed in special education classes for either the learning disabled or emotionally disturbed. A three factor MANOVA was employed to determine possible interactions among sex, type of special class placement, and type of achievement discrepancy of the subjects. Three Helmert type a priori contrasts were specified to determine if the recategorization was upheld for this sample generally or if it identified different cognitive structures for the various subgroups.

The Bannatyne recategorization was supported but it did not differentiate among various subgrooups of learning disabled and emotionally disturbed children. The analyses lended support to the notion that the classifications studied may be cognitive subsets of each other.

EC172003

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Wyman E. Fischer
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BANNATYNE RECATEGORIZATION'S EFFICACY IN DIFFERENTIATING LEARNING DISABLED AND EMOTIONALLY DISTURBED

Wyman Fischer
Stanley Wenck
K. Terry Schurr

Ball State University

Paper presented at the Conference of the National Association of School Psychologists (Philadelphia, PA, April, 1984)

The use of the Bannatyne recategorization of the WISC-R in diagnosis of learning disabilities has received considerable research attention (Rugel, 1974). Bannatyne's system (1974) calls for the grouping of twelve WISC-R scaled scores to form the Spatial (SPA), Conceptual (CON), Sequential (SEQ), and Aquired Knowledge (ACQ) categories. The SPA score groups the Block Design, Picture Completion, and Object Assembly subtest scaled scores. The CON category combines Comprehension, Similarities and Vocabulary. The SEQ grouping contains Digit Span, Coding, and Arithmetic. Lastly, Information, Arithmetic and Vocabulary form the ACQ category.

Bannatyne's contention was that learning disabled children display a particular patterning of WISC-R scores: SPA > CON > SEQ and ACQ. Although this pattern has received general support in the research literature (Bannatyne, 1971, 1974; Rugel, 1974; Smith, Coleman, Dokecke, and Davis, 1977), several recent studies have not supported previous findings (Michavluk, 1981; Zarske and Moore, 1982). Additionally, mixed results have been obtained in studies attempting to use the Bannatyne recategorization method to differentiate among groups with different exceptional conditions such as learning disabilities (LD), emotional disturbance (ED) and mental handicaps (Henry and Wittman, 1981; Groff and Hubble, 1981; Miller and others, 1980; Zarske and Moore, 1982). Few, if any studies are available which examined if the Bannatyne pattern differentiates learning disabililty subgroups, in particular, subgroups with specific problems in either reading or arithmetic.

Four purposes of this research were to (1) provide additional information regarding the efficacy of the recategorization for identifying LD children and to assess whether the recategorization is related to differences between (2) sexes, (3) LD and ED children and (4) children with relative discrepancies in either reading or arithmetic.

Subjects (n = 327) used for the study were obtained from a medium size Indiana metropolitan school system. They had

BEST COPY AVAILABLE

been identified during their elementary school years and placed into either the LD or ED categories by an authorized case conference committee according to guidelines established by PL 94-142 and Indian Rule S-1. Reading (LRD) and Arithmetic (LAR) discrepancies were operationally defined by a difference of 10 standard score points or greater between corresponding WRAT achievement scores: a third group (NO) consisted of subjects for which the difference was less than 10 points. Both the WISC-R and the WRAT scores used were from tests administered during the time subjects were being considered for placement. No subjects who qualified as mentally handicapped were included.

A three factor MANOVA was employed for the data analysis: SEX (male vs female), CLS (LD vs. ED) and DIS (LAR, NO and LRD). Helmert type contrasts among the recategorizations were specified to reflect the proposed, ordered relationships among the recategorizations: BAN1 = SPA - (CON + SEQ + ACQ) / 3, BAN2 = CON - (SEQ + ACQ) / 2 AND BAN3 = SEQ - ACQ. Contrasts among the DIS levels were also specified as LAR vs NO and NO vs. LRD.

Overall statistical tests supported the proposed relative ordering of the Bannatyne recategorization means: The SPA mean was larger than CON, SEQ and ACQ means, the CON mean was larger than the SEQ and ACQ means and there was no statistically significant difference between the SEQ and ACQ means. However, results from the group comparisons in which the multivariate F was significant for all three main effects suggested either that the ordering was not present for some groups or that the magnitude of the ordering was different. None of the interactions were significant.

Inspection of the univariate F values suggested the differences among the groups could be attributed to the following: SEX, the proposed ordering among SPA, CON, SEQ and ACQ was present for both males and females but the male ACQ was larger than SEQ whereas the female ACQ was smaller than SEQ; LD-ED, the proposed ordering was present for both LD and ED but any observed difference seemed largely attributable to the LD means being larger than the ED means and DIS, the proposed ordering was present for all three subgroups but the NO SPA mean was larger than the LAR SPA mean and, also, tended to be larger than the LRD SPA mean.

Note: The attached charts relate to both the total sample and the L.D. / E.D. subsamples.

References

Bannatyne, A. "Diagnosis: A Note on Recategorization of the WISC Scaled Scores," Journal of Learning Disabilities. 1974, 7, 272-274.

Bannatyne, A. Language, Reading and Learning Disabilities. Charles C. Thomas, Springfield, Illinois. 1971.

Farnham-Diggory, Sylvia. Learning Disabilities - A Psychological Perspective. Harvard University Press, Cambridge, Massachusetts, 1978.

Groff, Marlin G. and Hubble, Larry M. "Recategorized WISC-R Scores of Juvenile Delinquents," Journal of Learning Disabilities. 1981, 14, 515-516.

Gutkin, Terry B. "Bannatyne Patterns of Caucasian and Mexican American Learning Disabled Children," Psychology in the Schools. 1979, 16, 178-183.

Henry, Stephen A. and Wittman, Robert D. "Diagnostic Implications of Bannatyne's Recategorized WISC-R Scores for Identifying Learning Disabled Children," Journal of Learning Disabilities. 1981, 14, 517-520.

Jani, Subhash N. "Dyslexia - A Summary of Representative View," Journal of the Association for the Study of Perception. 1973, 8, 30-37.

Kaufman, Alan S. Intelligent Testing with the WISC-R. John Wiley and Sons, New York, 1979.

Kaufman, Alan S. "Assessment: The Wechsler Scales and Learning Disabilities. Part II: Data and Guidelines for Interpreting Wechsler Profiles," Journal of Learning Disabilities. 1981, 14, 460-469.

Michayluk, J.D. "Recategorization of WPPSI Scores for Kindergarten Children with Learning Difficulties," Journal of Learning Disabilities. 1981, 4, 408-411.

Miller, Lamoine J. and Others. "Application of Recategorized WISC-R scores for Adjudicated Adolescents," Perceptual and Motor Skills. 1980, 51, 187-191.

Rugel, Robert P. "WISC Subtest Scores of Disabled Readers: A Review with Respect to Bannatyne's Recategorization," Journal of Learning Disabilities. 1974, 7, 48-55.

Smith, M.D., et al. "Intellectual Characteristics of Learning Disabled Children," Journal of Learning Disabilities. 1977, 10, 437-443.

Vance, Hubert Booney and Singer, Marc G. "Recategorization of the WISC-R Subtest Scaled Scores for Learning Disabled Children," Journal of Learning Disabilities. 1979, 12, 487-491.

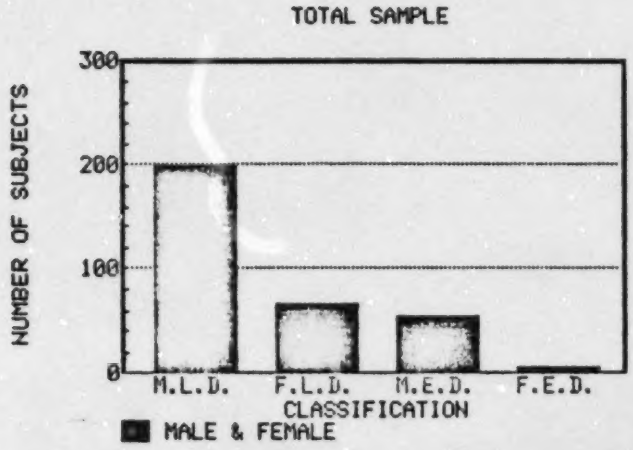
Webster, Raymond E. and Lafayette, Ann D. "Distinquishing among Three Subgroups of Handicapped Students Using Bannatyne's Recategorization," Journal of Educational Research. 1980, 73, 237-240.

Zarske, John A and Moore, Clay L. "Recategorized WISC-R Scores of the Learning Disabled Navajo Indian Children," Psychololgy in the Schools. 1982, 19, 156-159.

Zarske, John A and Moore, Clay L. "Recategorized WISC-R Scores for Non-Handicapped, Learning Disabled, Educationally Disadvantaged and Regular Classroom Navajo Children," School Psychology Review. 1982, 11, 319-323.

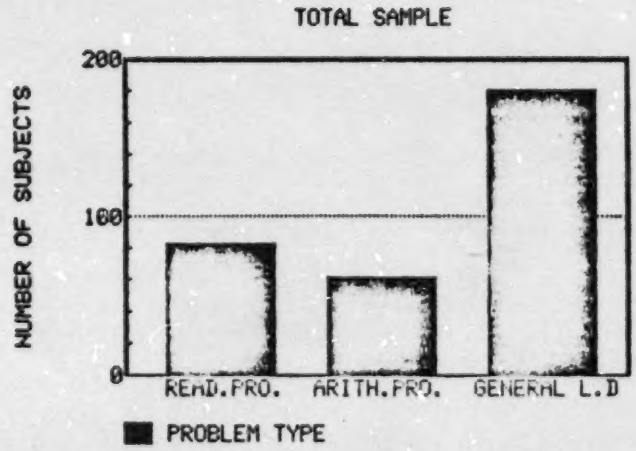
MALE & FEMALE

M.L.D.	199
F.L.D.	67
M.E.D.	55
F.E.D.	6



PROBLEM TYPE

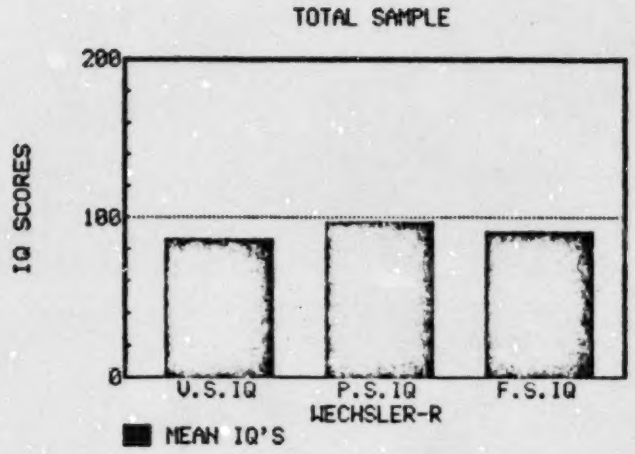
READ.PRO.	84
ARITH.PRO.	63
GENERAL L.D.	180



BEST COPY AVAILABLE

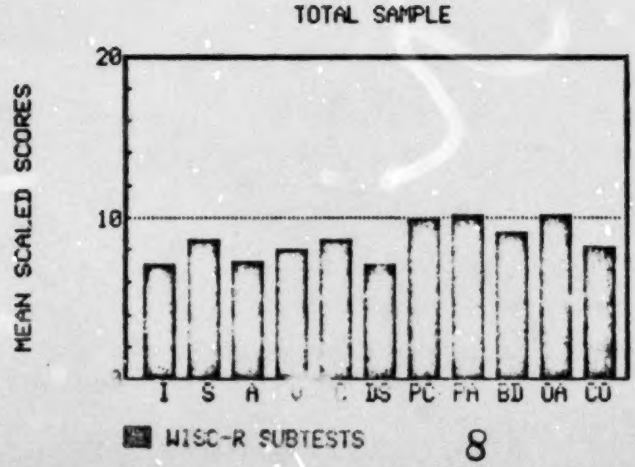
MEAN IQ'S

V.S.IQ	87.06
P.S.IQ	96.97
F.S.IQ	90.96



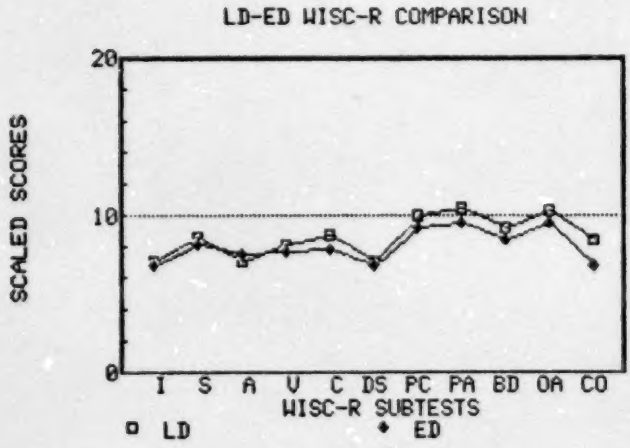
WISC-R SUBTESTS

	7.15
	8.66
	7.24
	8.09
	8.62
S	7.12
C	9.98
A	10.30
O	9.16
A	10.26
DD	8.26



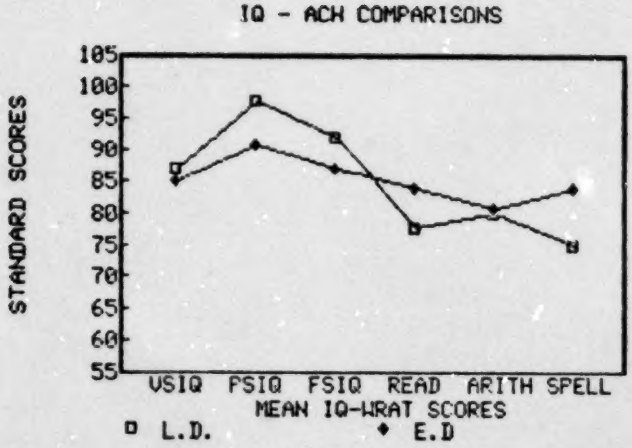
BEST COPY AVAILABLE

	LD	ED
I	7.20	6.90
S	8.70	8.20
A	7.20	7.60
V	8.20	7.70
C	8.80	7.90
DS	7.20	6.90
PC	10.10	9.30
PA	10.50	9.60
BD	9.30	8.50
OA	10.40	9.60
CO	8.60	6.80



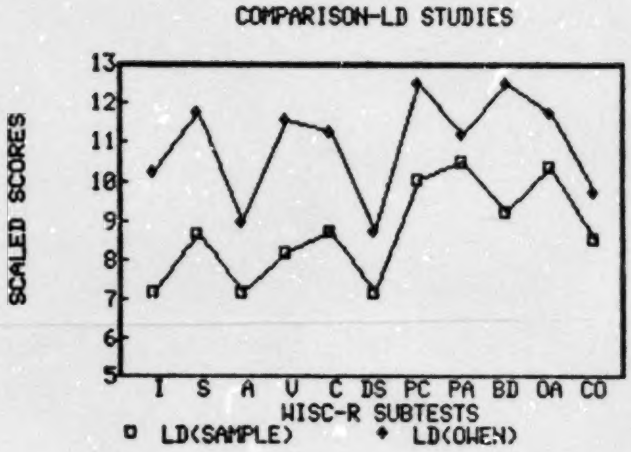
BEST COPY AVAILABLE

	L.D.	E.D
VSIQ	87	85
PSIQ	98	91
FSIQ	92	87
READ	78	84
ARITH	80	81
SPELL	75	84



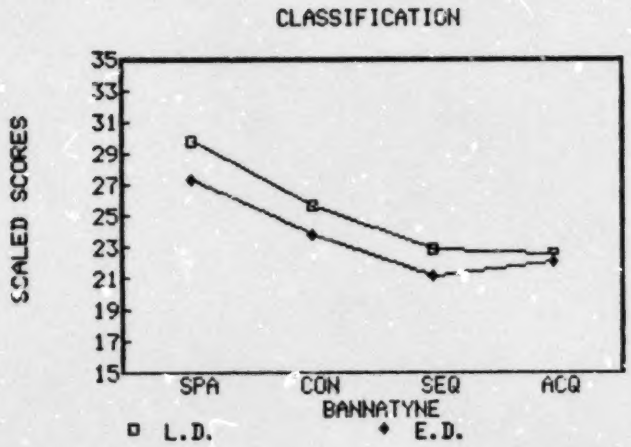
BEST COPY AVAILABLE

	LD(SAMPLE)	LD(OWEN)
	7.20	10.30
	8.70	11.80
	7.20	9
	8.20	11.60
	8.80	11.30
	7.20	8.80
	10.10	12.50
	10.50	11.20
	9.30	12.50
	10.40	11.80
	8.60	9.80

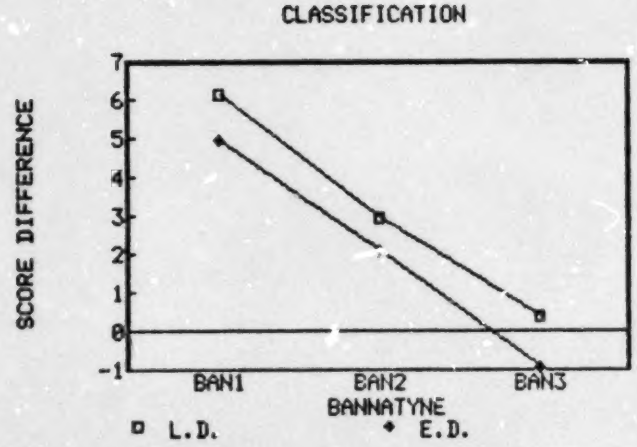


BEST COPY AVAILABLE

	L.D.	E.D.
SPA	29.87	27.36
CON	25.73	23.77
SEQ	22.94	21.25
ACQ	22.55	22.15

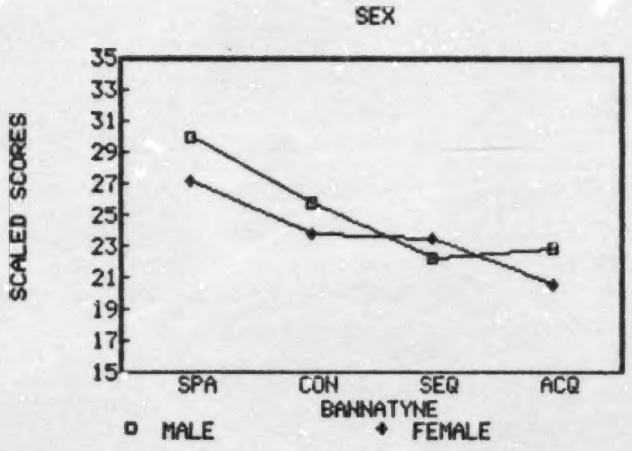


	L.D.	E.D.
BAN1	6.13	4.97
BAN2	2.99	2.07
BAN3	0.39	-0.90

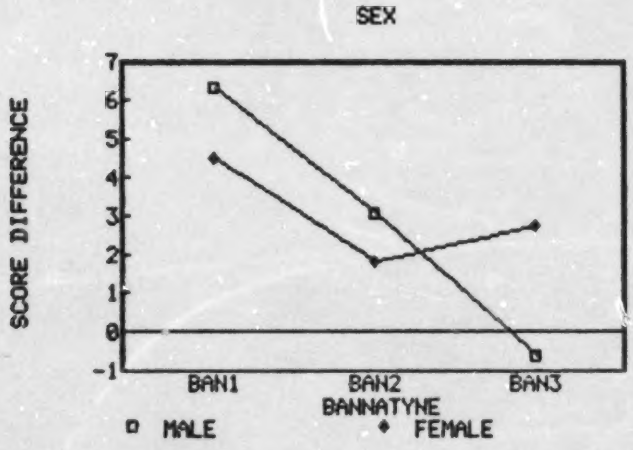


BEST COPY AVAILABLE

	MALE	FEMALE
SPA	30.04	27.18
CON	25.79	23.89
SEQ	22.38	23.47
ACQ	22.99	20.67

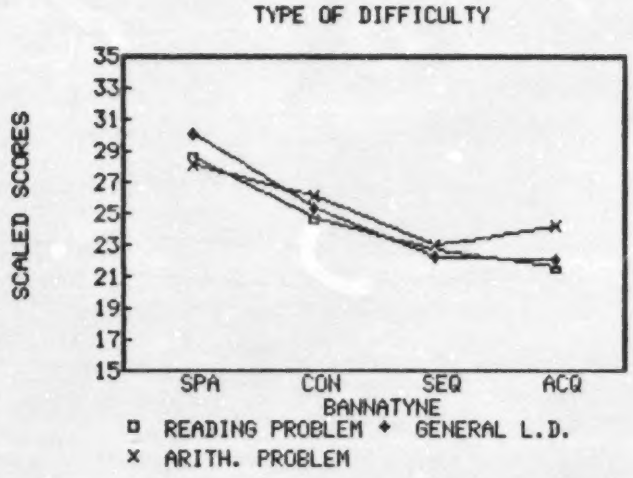


	MALE	FEMALE
BAN1	6.32	4.51
BAN2	3.10	1.83
BAN3	-0.62	2.81

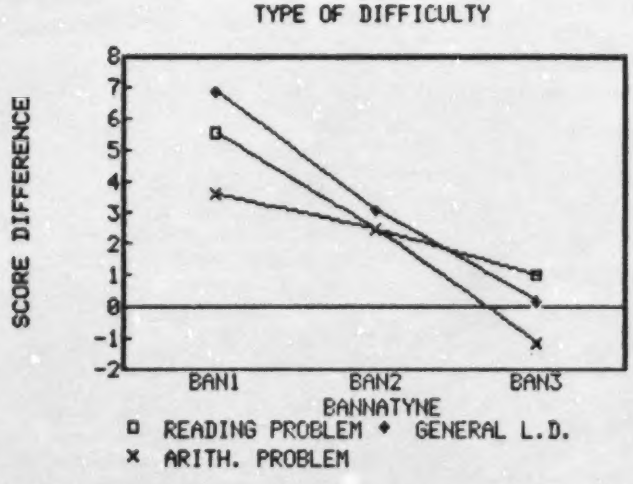


BEST COPY AVAILABLE

	READING PROBLEM	GENERAL L.D.	ARITH. PROBLEM
SPA	28.65	30.18	28.17
CON	24.73	25.38	26.19
SEQ	22.74	22.38	23.14
ACQ	21.73	22.21	24.24



	READING PROBLEM	GENERAL L.D.	ARITH. PROBLEM
BAN1	5.59	6.86	3.65
BAN2	2.49	3.08	2.50
BAN3	1.01	0.18	-1.10



BEST COPY AVAILABLE